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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,005

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Jan Grund-Pedersen

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EXAMINER

FRISBY, KESHA

ART UNIT

PAPER NUMBER

3715

MAIL DATE

DELIVERY MODE

07/14/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,005	Applicant(s) GRUND-PEDERSEN, JAN	
	Examiner KESHA FRISBY	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/11/2010 & 4/20/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. After the amendment was filed on 3/24/2010, claims 1-7 are pending in this application. Claim 7 was newly added.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-5 & 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Anderson et al. (U.S. Publication Number 2002/0168618).**

Referring to claim 1, Anderson et al. discloses comprising a control unit (paragraphs 0123-0125) system processor) and an interface unit (paragraph 0114), said control unit communicating with said interface unit to simulate handling of at least one instrument interfaced by said interface unit (Figs. 1-4 & the associated text), wherein said instrument is a self expanding tool inserted inside a simulated vessel (paragraphs 0018 & 0036) and the control unit is configured to simulate said instrument with respect to a set value (paragraphs 0023 & 0037: physiological parameters and alter parameters) representing a stiffness of said vessel, a rest diameter of said self expanding tool, an initial inner diameter of said vessel and spring constant for said tool.

Referring to claim 2, Anderson et al. discloses wherein said instrument is a stent (paragraphs 0018 & 0036).

Referring to claim 3, Anderson et al. discloses wherein said instrument is a distal

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protection device (simulated catheter & guidewire).

Referring to claim 4, Anderson et al. discloses wherein said distal protection device comprises a double cone attached at two ends to a wire (simulated catheter and guidewire).

Referring to claim 5, Anderson et al. discloses wherein a distal part of one cone is a net for simulating catching particles that can be set free during an intervention simulation (catheter/shaft).

Referring to claim 7, Anderson et al. discloses a control unit communicating (paragraphs 0123-0125) system processor) with said interface unit (paragraph 0114) to simulate handling of at least one instrument interfaced by said interface unit (Figs. 1-4 & the associated text), wherein said at least one instrument is a self-expanding tool inserted inside a simulated vessel (paragraphs 0018 & 0036), and the control unit (paragraphs 0123-0125) system processor) is configured to simulate said instrument with respect to a set value representing an stiffness of said simulated vessel, a rest diameter of said self-expanding tool, an initial inner diameter of said simulated vessel, and a spring constant for said self- expanding tool; and an interface unit (paragraph 0114), said interface unit including a detecting member adapted to detect a thickness of said at least one instrument (deformable models), and an optical sensor (one or more optical sensors) adapted to detect the presence of said at least one instrument in the interface unit, wherein said control unit (paragraphs 0123-0125) system processor) is further configured to measure a longitudinal movement and a movement of rotation of said at least one instrument and providing a force-feedback in a longitudinal direction

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and in a direction of rotation of said at least one instrument according to a received force and torque.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (U.S. Publication Number 2002/0168618).

Referring to claim 6, Anderson et al. discloses including a control unit (paragraphs 0123-0125) system processor) and an interface unit (paragraph 0114), said control unit communicating with said interface unit to simulate handling of at least one instrument interfaced by said interface unit (Figs. 1-4 & the associated text), the method comprising providing said at least one instrument as a self expanding tool inserted inside a simulated vessel (paragraphs 0018 & 0036); and simulating said at least one instrument with respect to a set value (paragraphs 0023 & 0037: physiological parameters and alter parameters) representing a stiffness of said vessel (paragraph 0068), a rest diameter of said self expanding tool, an initial inner diameter of said vessel (paragraphs 0151 & 0193) and spring constant for said tool. *Anderson et al. does not disclose simulating said at least one instrument with respect to a set value representing a rest diameter of said self expanding tool and a spring constant of said self expanding tool.* However, Merrill teaches simulating said at least one instrument with respect to a set value

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representing a rest diameter of said self expanding tool (column 9 lines 51-54 & lines 62-66, column 11 lines 29-32, column 12 lines 26-30, column 14 lines 43-46 & lines 52-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include simulating said at least one instrument with respect to a set value representing a rest diameter of said self expanding tool, as disclosed by Merrill, incorporated into Anderson et al. in order to help simulate a medical procedure. *Anderson et al./Merril does not disclose simulating said at least one instrument with respect to a set value representing a spring constant of said self expanding tool.*

However, Tarr teaches simulating said at least one instrument with respect to a set value representing a spring constant of said self expanding tool (spring constant). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include simulating said at least one instrument with respect to a set value representing a spring constant of said self expanding tool, as disclosed by Tarr, incorporated into Anderson et al./Merril in order to determine the tool interaction force.

Response to Arguments

5. Applicant's arguments, see Remarks and amended claim 4 and Replacement Pages, filed 3/24/2010 & 4/20/2010, with respect to Drawing Objections have been fully considered and are persuasive. The objection of the Drawings has been withdrawn.

6. Applicant's arguments, see amended claims 1 & 6, filed 3/24/2010, with respect to Claim Objections have been fully considered and are persuasive. The objections of claims 1 & 6 have been withdrawn.

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7. Applicant's arguments, see amended claim 4, filed 3/24/2010, with respect to 35 USC 112, second paragraph have been fully considered and are persuasive. The rejection of claim 4 has been withdrawn.

8. Applicant's arguments with respect to claims 1-5, 6 & 7 have been considered but are moot in view of the new ground(s) of rejection.

Citation of Pertinent Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sarnoff (U.S. Patent Number 3,426,448) teaches a training injection device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KESHA FRISBY whose telephone number is (571)272-8774. The examiner can normally be reached on Monday-Friday 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on 571-272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kesha Frisby
Examiner
Art Unit 3715

/Kesha Frisby/
Examiner, Art Unit 3715